

What is claimed is:

1. An active type vibration isolating support system comprising:  
an elastic body for elastically supporting a vibratory body  
on a supporting system;

a liquid chamber defined by this elastic body, in which liquid  
is sealed;

a movable member for changing capacity of this liquid chamber;  
and

an electromagnetic actuator for driving this movable member,  
wherein the actuator has: a fixed core to be supported by the  
supporting system; a movable core to be coupled to the movable  
member for being arranged opposite to this fixed core via an air  
gap; a coil for generating an electromagnetic attracting force  
between these fixed and movable cores; and coupling devices for  
coupling the movable member and the movable core so as to be able  
to adjust the air gap between the fixed core and the movable core.

2. The active type vibration isolating support system according  
to claim 1, wherein the coupling device comprises: a coupling bolt  
made integral with the movable member to penetrate the movable  
core in the axial direction; an adjustment nut which threadedly  
engages with a tip end of this coupling bolt and is able to advance  
and retreat the movable core with respect to the fixed core by  
an advance and retreat of its threadedly engaged position; and  
a set spring, which is provided between the movable member and  
the movable core in a compressed state, for biasing the movable  
core in a direction abutting against the adjustment nut.

3. The active type vibration isolating support system according to claim 1, wherein a spring seat is interposed between the set spring and the movable core.

4. The active type vibration isolating support system according to claim 2, wherein a spring seat is interposed between the set spring and the movable core.

5. The active type vibration isolating support system according to claim 1, wherein to a housing for accommodating and holding the fixed core and the coil of the actuator, there is fixed a yoke having a cylindrical portion to be surrounded by the coil; on an inner peripheral surface of the cylindrical portion, there is slidably fitted a cylindrical bearing member for slidably supporting the movable core; at a lower end of this bearing member, there is formed an outward lower flange to be supported on a supporting portion continuing to the fixed core; between this lower flange and the cylindrical portion, there is provided in a compressed state a set spring for urging the lower flange against the supporting portion; at an upper end of the bearing member, there is formed an inward upper flange for receiving the movable core so as to define a limitation of movement of the movable core in a direction apart from the fixed core.

6. The active type vibration isolating support system according to claim 2, wherein to a housing for accommodating and holding the fixed core and the coil of the actuator, there is fixed a yoke having a cylindrical portion to be surrounded by the coil; on an inner peripheral surface of the cylindrical portion, there is

slidably fitted a cylindrical bearing member for slidably supporting the movable core; at a lower end of this bearing member, there is formed an outward lower flange to be supported on a supporting portion continuing to the fixed core; between this lower flange and the cylindrical portion, there is provided in a compressed state a set spring for urging the lower flange against the supporting portion; at an upper end of the bearing member, there is formed an inward upper flange for receiving the movable core so as to define a limitation of movement of the movable core in a direction apart from the fixed core.

7. The active type vibration isolating support system according to claim 3, wherein to a housing for accommodating and holding the fixed core and the coil of the actuator, there is fixed a yoke having a cylindrical portion to be surrounded by the coil; on an inner peripheral surface of the cylindrical portion, there is slidably fitted a cylindrical bearing member for slidably supporting the movable core; at a lower end of this bearing member, there is formed an outward lower flange to be supported on a supporting portion continuing to the fixed core; between this lower flange and the cylindrical portion, there is provided in a compressed state a set spring for urging the lower flange against the supporting portion; at an upper end of the bearing member, there is formed an inward upper flange for receiving the movable core so as to define a limitation of movement of the movable core in a direction apart from the fixed core.

8. The active type vibration isolating support system according to claim 4, wherein to a housing for accommodating and holding

the fixed core and the coil of the actuator, there is fixed a yoke having a cylindrical portion to be surrounded by the coil; on an inner peripheral surface of the cylindrical portion, there is slidably fitted a cylindrical bearing member for slidably supporting the movable core; at a lower end of this bearing member, there is formed an outward lower flange to be supported on a supporting portion continuing to the fixed core; between this lower flange and the cylindrical portion, there is provided in a compressed state a set spring for urging the lower flange against the supporting portion; at an upper end of the bearing member, there is formed an inward upper flange for receiving the movable core so as to define a limitation of movement of the movable core in a direction apart from the fixed core.

9. An active type vibration isolating support system comprising:
  - an elastic body for elastically supporting a vibratory body on a supporting system;
  - a liquid chamber defined by this elastic body, in which liquid is sealed;
  - a movable member for changing capacity of this liquid chamber;
  - and
  - an electromagnetic actuator for driving this movable member, wherein the actuator has: a fixed core to be supported on the supporting system; a movable core to be coupled to the movable member for being arranged opposite to this fixed core via a conical tube-shaped air gap; a coil for generating an electromagnetic attracting force between these fixed and movable cores; a coupling device coupled to the movable member to penetrate the movable core in the axial direction so as to be relatively movable to support

a fixed core-side end surface of the movable core; a set spring provided between the movable member and the movable core in a compressed state, for biasing the movable core toward a supporting portion of the coupling device; and a stopper member which even after the movable core has reached a limit of movement on the fixed core side, enables moving toward the fixed core side while the movable member compresses the set spring, and in order to restrict compression and deformation of the set spring in a predetermined amount or more, limits an amount of movement of the movable member after the movable core reaches the limit of movement.